

Substitute for form 1449A/PTO
(Modified)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	10/611,363
Filing Date	July 1, 2003
First Named Inventor	DESJARLAIS, John R.
Art Unit	1647
Examiner Name	To Be Assigned R.M. DeBerto
Attorney Docket Number	A-71486-2

Sheet 1 of 6

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
[Signature]	A1	5,843,678	12-01-1998	Boyle	
	A2	6,017,729	01-25-2000	Anderson et al.	
	A3 *	6,188,965 B1	02-13-2001	Mayo et al.	
	A4 *	6,269,312 B1	07-13-2001	Mayo et al.	
	A5	6,316,408 B1	11-13-2001	Boyle	
	A6 *	6,403,312 B1	06-11-2002	Dahiyat et al.	
	A7 *	6,708,120 B1	03-16-2004	Mayo et al.	
	A8 *	2001/0032052 A1	10-18-2001	Mayo et al.	
	A9 *	2001/0039480 A1	11-08-2001	Mayo et al.	
	A10 *	2002/0004706 A1	01-10-2002	Mayo et al.	
	A11 *	2002/0009780 A1	01-24-2002	Dahiyat et al.	
	A12 *	2002/0048772 A1	04-25-2002	Dahiyat et al.	
	A13 *	2002/0090648 A1	07-11-2002	Dahiyat et al.	
	A14 *	2002/0106694 A1	08-08-2002	Mayo et al.	
	A15 *	2002/0110868 A1	08-15-2002	Dahiyat et al.	
	A16	2003/0013651 A1	01-16-2003	Lam et al.	
	A17 *	2003/0049654 A1	03-13-2003	Dahiyat et al.	
	A18 *	2003/0130827 A1	07-10-2003	Dahiyat et al.	
	A19 *	2003/0138401 A1	07-24-2003	Dahiyat et al.	
	A20 *	2003/0166559 A1	09-04-2003	Desjarlais et al.	
	A21 *	2003/0219864 A1	11-27-2003	Desjarlais et al.	
	A22 *	2004/0043429 A1	03-04-2004	Dahiyat et al.	
	A23 *	2004/0043430 A1	03-04-2004	Dahiyat et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.	Foreign Patent Document Country Code ³ Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
[Signature]	B1 *	EP 0 974 111 B1	01-26-2000	California Institute of Technology		
	B2 *	WO 98/47089 A1	10-22-1998	California Institute of Technology		
	B3	WO 99/29865 A3	06-17-1999	The Rockefeller University		
	B4 *	WO 00/15807 A1	03-23-2000	M & E Biotech		
	B5 *	WO 00/23564 A2	04-27-2000	Xencor, Inc.		

Examiner Signature	[Signature]	Date Considered	9/5/06
--------------------	-------------	-----------------	--------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2

Substitute for form 1449A/PTO (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known			
		Application Number	10/611,363		
		Filing Date	July 1, 2003		
		First Named Inventor	DESJARLAIS, John R.		
		Art Unit	1647		
		Examiner Name	To Be Assigned <i>R.M. DeBert</i>		
Sheet	2	of	6	Attorney Docket Number	A-71486-2

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.	Foreign Patent Document Country Code* Number* Kind Code* (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T*
<i>RD</i>	B6 *	WO 01/59066 A2, A3	08-16-2001	Xencor, Inc.		
	B7 *	WO 03/014325 A2, A3	02-20-2003	Xencor		
<i>RD</i>	B8	WO 03/033663 A2	04-24-2003	Barnes-Jewish Hospital		
	B9	WO 03/033664 A2	04-24-2003	Barnes-Jewish Hospital		

NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				T*
<i>RD</i>	C1	ADLER, S.H., and TURKA L.A., "Immunotherapy as a means to induce transplantation tolerance," Curr Opin Immunol, 2002 Oct, 14(5):660-5.				
	C2	ALATALO S.L., et al., "Rapid Screening Method for Osteoclast Differentiation in Vitro That Measures Tartrate-resistant Acid Phosphatase 5b Activity Secreted into the Culture Medium," Clin Chem, 2000 Nov, 46(11):1751-4.				
	C3	ANDERSON DM, et al., "A homologue of the TNF receptor and its ligand enhance T-cell growth and dendritic-cell function," Nature, 1997 Nov 13, 390(6658):175-9.				
	C4	ARRON JR, and CHOI Y, "Bone versus immune system," Nature, 2000 Nov 30, 408(6812):535-6.				
	C5	ATKINS GJ, et al., "Osteoprotegerin inhibits osteoclast formation and bone resorbing activity in giant cell tumors of bone," Bone, 2001 Apr, 28(4):370-7.				
	C6	BACHMANN MF, and KOPF M., "Balancing protective immunity and immunopathology," Curr Opin Immunol, 2002 Aug, 14(4):413-9.				
	C7	BIANCHI L, et al., "A cluster region of AP-1 responsive elements is required for transcriptional activity of mouse ODC gene by hepatocyte growth factor," Arch Biochem Biophys, 2002 May 1, 401(1):115-23.				
	C8	BODMER JL, et al., "The molecular architecture of the TNF superfamily," Trends Biochem Sci., 2002 Jan, 27(1):19-26.				
	C9	CHILDS LM, et al., "In Vivo RANK Signaling Blockade Using the Receptor Activator of NF-kappaB:Fc Effectively Prevents and Ameliorates Wear Debris-Induced Osteolysis Via Osteoclast Depletion Without Inhibiting Osteogenesis," J Bone Miner Res., 2002 Feb, 17(2):192-9.				
	C10	COLLIN-OSDOBY P, et al., "Receptor Activator of NF-kappa B and Osteoprotegerin Expression by Human Microvascular Endothelial Cells, Regulation by Inflammatory Cytokines, and Role in Human Osteoclastogenesis," J Biol Chem., 2001 Jun 8, 276(23):20659-72.				
	C11	COMPSTON JE., "Bone marrow and bone: a functional unit," J Endocrinol., 2002 Jun, 173(3):387-94.				
<i>RD</i>	C12	CUROTTO de LAFAILLE MA, and LAFAILLE JJ., "CD4(+) regulatory T cells in autoimmunity and allergy," Curr Opin Immunol., 2002 Dec, 14(6):771-8.				
	C13	DARNAY BG, et al., "Characterization of the intracellular domain of receptor activator of NF-kappaB (RANK). Interaction with tumor necrosis factor receptor-associated factors and activation of NF-kappaB and c-Jun N-terminal kinase," J Biol Chem., 1998 Aug 7, 273(32):20551-5.				

Examiner Signature	<i>[Signature]</i>	Date Considered	9/5/06
--------------------	--------------------	-----------------	--------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
 *Applicant's unique citation designation number (optional). * See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. * Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). * For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. * Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. * Applicant is to place a check mark here if English Language Translation is attached.
 This collection of information is required by 37 CFR 1.87 and 1.88. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2

Substitute for form 1449A/PTO (Modified)			Complete if Known		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Application Number	10/611,363	
			Filing Date	July 1, 2003	
			First Named Inventor	DESJARLAIS, John R.	
			Art Unit	1647	
			Examiner Name	To Be Assigned <i>L.M. DeBem</i>	
Sheet	3	of	6	Attorney Docket Number	A-71486-2

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T*	
<i>[initials]</i>	C14	DEYAMA Y, et al., "Histamine stimulates production of osteoclast differentiation factor/receptor activator of nuclear factor-kappaB ligand by osteoblasts," Biochem Biophys Res Commun., 2002 Oct 25, 298(2):240-6.		
	C15	FATA JE, et al., "The osteoclast differentiation factor osteoprotegerin-ligand is essential for mammary gland development," Cell., 2000 Sep 29, 103(1):41-50.		
	C16	GAO YH, et al., "Potential role of cbfa1, an essential transcriptional factor for osteoblast differentiation, in osteoclastogenesis: regulation of mRNA expression of osteoclast differentiation factor (ODF)," Biochem Biophys Res Commun., 1998 Nov 27, 252(3):697-702.		
	C17	GOATER JJ, et al., "Efficacy of ex vivo OPG gene therapy in preventing wear debris induced osteolysis," J Orthop Res. 2002 Mar, 20(2):169-73.		
	C18	GOOD CR, et al., "Immunohistochemical study of receptor activator of nuclear factor kappa-B ligand (RANK-L) in human osteolytic bone tumors," J Surg Oncol., 2002 Mar, 79(3):174-9.		
	C19	GORI F, et al., "The expression of osteoprotegerin and RANK ligand and the support of osteoclast formation by stromal-osteoblast lineage cells is developmentally regulated," Endocrinology, 2000 Dec, 141(12):4768-76.		
	C20	GOWEN M et al., "Emerging therapies for osteoporosis," Exp. Opin. on Emerging Drugs, 2000, 5(1):1-43		
	C21	GRAVALLESE EM, et al., "The role of TNF-receptor family members and other TRAF-dependent receptors in bone resorption," Arthritis Res., 2001, 3(1):6-12.		
	C22	HOFBAUER LC, et al., "Interleukin-1beta and tumor necrosis factor-alpha, but not interleukin-6, stimulate osteoprotegerin ligand gene expression in human osteoblastic cells," Bone, 1999 Sep, 25(3):255-9.		
	C23	HOFBAUER LC, et al., "Receptor activator of nuclear factor-kappaB ligand and osteoprotegerin: potential implications for the pathogenesis and treatment of malignant bone diseases," Cancer, 2001 Aug 1, 92(3):460-70.		
	C24	HONORE P, et al., "Osteoprotegerin blocks bone cancer-induced skeletal destruction, skeletal pain and pain-related neurochemical reorganization of the spinal cord," Nat Med. 2000 May;6(5):521-8.		
	C25	HOTOKEZAKA H, et al., "U0126 and PD98059, specific inhibitors of MEK, accelerate differentiation of RAW264.7 cells into osteoclast-like cells," J Biol Chem., 2002 Dec 6, 277(49):47366-72.		
	C26	HSU H, et al., "Tumor necrosis factor receptor family member RANK mediates osteoclast differentiation and activation induced by osteoprotegerin ligand," Proc Natl Acad Sci U S A., 1999 Mar 30, 96(7):3540-5.		
	C27	HUBER DM, et al., "Androgens suppress osteoclast formation induced by RANKL and macrophage-colony stimulating factor," Endocrinology, 2001 Sep, 142(9):3800-8.		
	C28	IKEDA T, et al., "Determination of three isoforms of the receptor activator of nuclear factor-kappaB ligand and their differential expression in bone and thymus," Endocrinology, 2001 Apr, 142(4):1419-26.		
	C29	ITO S, et al., "Crystal structure of the extracellular domain of mouse RANK ligand at 2.2-A resolution," J Biol Chem., 2002 Feb 22, 277(8):6631-6.		
	C30	KANEDA T, et al., "Endogenous production of TGF-beta is essential for osteoclastogenesis induced by a combination of receptor activator of NF-kappa B ligand and macrophage-colony-stimulating factor," J Immunol., 2000 Oct 15, 165(8):4254-63.		
	C31	KITAZAWA R, and KITAZAWA S., "Vitamin D ₃ augments osteoclastogenesis via vitamin D-responsive element of mouse RANKL gene promoter," Biochem Biophys Res Commun, 2002 Jan 18, 290(2):650-5.		
	C32	KITAZAWA R, et al., "Promoter structure of mouse RANKL/TRANSC/OPGL/ODF gene," Biochim Biophys Acta., 1999 Apr 14, 1445(1):134-41.		
<i>[initials]</i>	C33	KONG YY, et al., "Activated T cells regulate bone loss and joint destruction in adjuvant arthritis through osteoprotegerin ligand," Nature, 1999 Nov 18, 402(6759):304-9.		
Examiner Signature	<i>[Signature]</i>		Date Considered	9/5/06

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2

Substitute for form 1449A/PTO (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known			
		Application Number	10/611,363		
		Filing Date	July 1, 2003		
		First Named Inventor	DESJARLAIS, John R.		
		Art Unit	1647		
		Examiner Name	To Be Assigned <i>L.M. DeBerry</i>		
Sheet	4	of	6	Attorney Docket Number	A-71486-2

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Citation No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁴
<i>JD</i>	C34	LACEY DL, et al., "Osteoprotegerin ligand is a cytokine that regulates osteoclast differentiation and activation," Cell, 1998 Apr 17, 93(2):165-76.	
	C35	LAM J, et al., "TNF-alpha induces osteoclastogenesis by direct stimulation of macrophages exposed to permissive levels of RANK ligand," J Clin Invest., 2000 Dec, 106(12):1481-8.	
	C36	LAM J, et al., "Crystal structure of the TRANCE/RANKL cytokine reveals determinants of receptor-ligand specificity," J Clin Invest., 2001 Oct, 108(7):971-9.	
	C37	LARK MW, and JAMES IE, "Novel bone antiresorptive approaches," Curr Opin Pharmacol., 2002 Jun, 2(3):330-7.	
	C38	LEAN JM, et al., "Osteoclast lineage commitment of bone marrow precursors through expression of membrane-bound TRANCE," Bone, 2000 Jul, 27(1):29-40.	
	C39	LI J, et al., "RANK is the intrinsic hematopoietic cell surface receptor that controls osteoclastogenesis and regulation of bone mass and calcium metabolism," Proc Natl Acad Sci U S A, 2000 Feb 15, 97(4):1566-71.	
	C40	LIU Y, et al., "Crystal structure of sTALL-1 reveals a virus-like assembly of TNF family ligands," Cell, 2002 Feb 8, 108(3):383-94.	
	C41	LOCKSLEY RM, et al., "The TNF and TNF receptor superfamilies: integrating mammalian biology," Cell, 2001 Feb 23, 104(4):487-501.	
	C42	LUM L, et al., "Evidence for a role of a tumor necrosis factor-alpha (TNF-alpha)-converting enzyme-like protease in shedding of TRANCE, a TNF family member involved in osteoclastogenesis and dendritic cell survival," J Biol Chem., 1999 May 7, 274(19):13613-8.	
	C43	MARTIN TJ, and GILLESPIE MT, "Receptor activator of nuclear factor kappa B ligand (RANKL): another link between breast and bone," Trends Endocrinol Metab., 2001 Jan-Feb, 12(1):2-4.	
	C44	MATSUZAKI K, et al., "Osteoclast differentiation factor (ODF) induces osteoclast-like cell formation in human peripheral blood mononuclear cell cultures," Biochem Biophys Res Commun., 1998 May 8, 246(1):199-204.	
	C45	McHUGH KP, et al., "Mice lacking beta3 integrins are osteosclerotic because of dysfunctional osteoclasts," J Clin Invest., 2000 Feb, 105(4):433-40.	
	C46	MENAA C, et al., "Enhanced RANK ligand expression and responsivity of bone marrow cells in Paget's disease of bone," J Clin Invest., 2000 Jun, 105(12):1833-8.	
	C47	NAKAGAWA N, et al., "RANK is the essential signaling receptor for osteoclast differentiation factor in osteoclastogenesis," Biochem Biophys Res Commun., 1998 Dec 18, 253(2):395-400.	
	C48	NAKASHIMA T, et al., "Protein expression and functional difference of membrane-bound and soluble receptor activator of NF-kappaB ligand: modulation of the expression by osteotropic factors and cytokines," Biochem Biophys Res Commun., 2000 Sep 7, 275(3):768-75.	
	C49	OYAJOB! BO, et al., "Therapeutic efficacy of a soluble receptor activator of nuclear factor kappaB-IgG Fc fusion protein in suppressing bone resorption and hypercalcemia in a model of humoral hypercalcemia of malignancy," Cancer Res., 2001 Mar 15, 61(6):2572-8.	
	C50	PENNINGER, Josef, "Bones, Lymphocytes, and Mammalian Evolution," Society for Biomolecular Screening 8 th Annual Conference, The Hague, The Netherlands, Sept. 22-26, 2002 (Abstract).	
<i>JD</i>	C51	QUINN JM, et al., "A combination of osteoclast differentiation factor and macrophage-colony stimulating factor is sufficient for both human and mouse osteoclast formation in vitro," Endocrinology, 1998 Oct, 139(10):4424-7.	
	C52	QUINN JM, et al., "The generation of highly enriched osteoclast-lineage cell populations," Bone, 2002 Jan, 30(1):164-70.	

Examiner Signature	<i>L.M. DeBerry</i>	Date Considered	9/5/06
--------------------	---------------------	-----------------	--------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
 *Applicant's unique citation designation number (optional). *See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. *Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). *For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. *Applicant is to place a check mark here if English Language Translation is attached.
 This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2

Substitute for form 1449A/PTO (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known		
			Application Number	10/611,363	
			Filing Date	July 1, 2003	
			First Named Inventor	DESJARLAIS, John R.	
			Art Unit	1647	
Examiner Name	To Be Assigned <i>R.M. Ober</i>				
Sheet	5	of	6	Attorney Docket Number	A-71486-2

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T*
<i>RO</i>	C53	RODAN GA, and Martin TJ, "Therapeutic approaches to bone diseases," Science, 2000 Sep 1, 289(5484):1508-14.	
	C54	ROMAS E, et al., "Involvement of receptor activator of NFkappaB ligand and tumor necrosis factor-alpha in bone destruction in rheumatoid arthritis," Bone, 2002 Feb, 30(2):340-6.	
	C55	SABOKBAR A, et al., "Two distinct cellular mechanisms of osteoclast formation and bone resorption in periprosthetic osteolysis," J Orthop Res., 2003 Jan, 21(1):73-80.	
	C56	SAIDENBERG KERMANAC'H N, et al., "Osteoprotegerin and inflammation," Eur Cytokine Netw., 2002 Apr-Jun, 13(2):144-53.	
	C57	SCHLONDORFF J, et al., "Biochemical and pharmacological criteria define two shedding activities for TRANCE/OPGL that are distinct from the tumor necrosis factor alpha convertase," J Biol Chem., 2001 May 4, 276(18):14665-74.	
	C58	SCHOPPET M, et al., "RANK ligand and osteoprotegerin: paracrine regulators of bone metabolism and vascular function," Arterioscler Thromb Vasc Biol., 2002 Apr 1, 22(4):549-53.	
	C59	SENIOR K., "Vaccinating against bone destruction," Drug Discov Today, 2001 Dec 15, 6(24):1243-1244.	
	C60	SHEVDE NK, et al., "Estrogens suppress RANK ligand-induced osteoclast differentiation via a stromal cell independent mechanism involving c-Jun repression," Proc Natl Acad Sci U S A, 2000 Jul 5, 97(14):7829-34.	
	C61	SRIVASTAVA S, et al., "Estrogen decreases osteoclast formation by down-regulating receptor activator of NF-kappa B ligand (RANKL)-induced JNK activation," J Biol Chem., 2001 Mar 23, 276(12):8836-40.	
	C62	SUDA T, et al., "Modulation of osteoclast differentiation and function by the new members of the tumor necrosis factor receptor and ligand families," Endocr Rev., 1999 Jun, 20(3):345-57.	
	C63	TAKAHASHI N, et al., "A new member of tumor necrosis factor ligand family, ODF/OPGL/TRANSE/RANKL, regulates osteoclast differentiation and function," Biochem Biophys Res Commun., 1999 Mar 24, 256(3):449-55.	
	C64	TAKAYANAGI H, et al., "RANKL maintains bone homeostasis through c-Fos-dependent induction of interferon-beta," Nature, 2002 Apr 18, 416(6882):744-9.	
	C65	TAKAYANAGI H, et al., "Signaling crosstalk between RANKL and interferons in osteoclast differentiation," Arthritis Res., 2002, 4(Suppl 3):S227-32.	
	C66	TEITELBAUM SL., "Bone resorption by osteoclasts," Science, 2000 Sep 1, 289(5484):1504-8.	
	C67	THEILL LE, et al., "RANK-L and RANK: T cells, bone loss, and mammalian evolution," Annu Rev Immunol., 2002, 20:795-823.	
	C68	TSUDA E, et al., "Isolation of a novel cytokine from human fibroblasts that specifically inhibits osteoclastogenesis," Biochem Biophys Res Commun., 1997 May 8, 234(1):137-42.	
	C69	UDAGAWA N, et al., "Origin of osteoclasts: mature monocytes and macrophages are capable of differentiating into osteoclasts under a suitable microenvironment prepared by bone marrow-derived stromal cells," Proc Natl Acad Sci U S A, 1990 Sep, 87(18):7260-4.	
	C70	VANDERKERKEN K, et al., "Recombinant osteoprotegerin decreases tumor burden and increases survival in a murine model of multiple myeloma," Cancer Res., 2003 Jan 15, 63(2):287-9.	
	C71	WEI S, et al., "Receptor activator of nuclear factor-kappa b ligand activates nuclear factor-kappa b in osteoclast precursors," Endocrinology, 2001 Mar, 142(3):1290-5.	
<i>RO</i>	C72	WEKERLE T, et al., "Mechanisms of transplant tolerance induction using costimulatory blockade," Curr Opin Immunol., 2002 Oct, 14(5):592-600.	

Examiner Signature	<i>R.M. Ober</i>	Date Considered	9/5/03
--------------------	------------------	-----------------	--------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
 *Applicant's unique citation designation number (optional). * See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. * Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). * For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. * Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. * Applicant is to place a check mark here if English Language Translation is attached.
 This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2

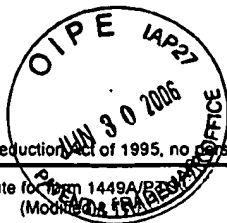
Substitute for form 1449A/PTO (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known		
			Application Number	10/611,363	
			Filing Date	July 1, 2003	
			First Named Inventor	DESJARLAIS, John R.	
			Art Unit	1647	
			Examiner Name	To Be Assigned <i>R.M. DeBergh</i>	
Sheet	6	of	6	Attorney Docket Number	A-71486-2

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁴
<i>[Signature]</i>	C73	WILLARD D, et al., "Expression, purification, and characterization of the human receptor activator of NF-kappaB ligand (RANKL) extracellular domain," Protein Expr Purif., 2000 Oct, 20(1):48-57.	
	C74	WONG BR, et al., "TRANCE is a novel ligand of the tumor necrosis factor receptor family that activates c-Jun N-terminal kinase in T cells," J Biol Chem., 1997 Oct 3, 272(40):25190-4.	
	C75	WUYTS W, et al., "Evaluation of the role of RANK and OPG genes in Paget's disease of bone," Bone, 2001 Jan, 28(1):104-7.	
<i>[Signature]</i>	C76	YAMAGISHI T, et al., "Reciprocal control of expression of mRNAs for osteoclast differentiation factor and OPG in osteogenic stromal cells by genistein: evidence for the involvement of topoisomerase II in osteoclastogenesis," Endocrinology, 2001 Aug, 142(8):3632-7.	
	C77	YASUDA H, et al., "Osteoclast differentiation factor is a ligand for osteoprotegerin/osteoclastogenesis-inhibitory factor and is identical to TRANCE/RANKL," Proc Natl Acad Sci U S A, 1998 Mar 31, 95(7):3597-602.	

Examiner Signature	<i>R.M. DeBergh</i>	Date Considered	9/5/06
--------------------	---------------------	-----------------	--------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.
 This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute PTO/SB/08A (07-05)
Approved for use through 07/31/2008. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/611,363
				Filing Date	July 1, 2003
				First Named Inventor	DESJARLAIS, John R.
				Art Unit	1647
				Examiner Name	TBA <i>R.M. DeBery</i>
Sheet	1	of	1	Attorney Docket Number	Docket A-71486-2 (463077-240)

Examiner Initials	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
<i>JD</i>	A1 ††	US-2002-061525 A1	05-23-2002	Rodrigo et al.	
<i>JD</i>	A2 †	US-6242213 B1	06-05-2001	Anderson	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No. ¹	Foreign Patent Document Country Code ² Number ³ Kind Code ⁴ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁵
<i>JD</i>	B1 †††	WO 00/15807 A *	03-23-2000	M & E Biotech		
	B2 ††	WO 00/67034 A	11-09-2000	Immunex Corporation		
	B3 †††	WO 01/25277 A	04-12-2001	Maxygen APS		
	B4 †††	WO 01/42298 A	04-21-2001	Kombluth		
	B5 †††	WO 01/64889 A	09-07-2001	Xencor		
	B6 ††	WO 02/18445 A	03-07-2002	Biogen, Inc.		
	B7 ††	WO 02/36141 A	05-10-2002	Immunex Corporation		
	B8 ††	WO 03/006154 A	01-23-2003	Xencor, Inc.		
	B9 ††	WO 03/029420 A	04-10-2003	Genentech, Inc.		
	B10 ††	WO 03/059281 A	07-24-2003	Xencor		
	B11 ††	WO 2004/081043 A	09-23-2004	Xencor		
	B12 ††	WO 2004/089982 A	10-21-2001	Xencor		
<i>JD</i>	B13 ††	WO 2005/035570 A	04-21-2005	Xencor, Inc.		
	B14 ††	WO 99/12965 A	03-18-1999	Biogen, Inc.		

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ⁵
<i>JD</i>	C1 †††	Lacey D. L. et al. "Osteoprotegerin ligand is a cytokine that regulates osteoclast differentiation and activation" <i>Cell</i> Cell Press, Cambridge, MA, US, vol. 93, April 17, 1998, pps. 165-176 *		
	C2 †††	Steed, P.M. et al. "Inactivation of TNF signaling by rationally designed dominant-negative TNF variants" <i>Science (American Assoc for the Advancement of Science)</i> vol. 301, no. 5641, (2003) pps. 1895-1898		
<i>JD</i>	C3 †††	Yasuda H. Et. Al. "Osteoclast Differentiation factor is a ligand for osteoprotegerin/osteoclastogenesis -inhibitory factor and is identical to TRANCE/RANKL" <i>Proc. Of Natl. Acad of Sci.</i> , (1998) vol. 95, pps. 3597-3602 *		

4818-1235-2513\16/26/2006\10:32 AM

Examiner Signature	<i>R.M. DeBery</i>	Date Considered	9/3/06
--------------------	--------------------	-----------------	--------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2